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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,720	04/07/2001	Richard LaPeruta JR.	PU000162	7788

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Thomson Multimedia Licensing Inc.
Patent Operation
P. O. Box 5312
Two Independence Way
Princeton, NJ 08543-5312

EXAMINER

PHINNEY, JASON R

ART UNIT PAPER NUMBER

2879

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,720

Applicant(s)

LAPERUTA ET AL.

Examiner

Jason Phinney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The use of the trademark KASIL™ has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "said fourth member" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination it will be assumed that "said fourth member" refers to Claim 3 which recites a fourth member.

Regarding Claim 12, Lines 35 - 37 read "aligning the mask strands and the barrier ridge elements to the mask frame perpendicular to the mask strands and the barrier ridge elements." This language does not clearly indicate the metes and bounds of that for which protection is sought. For the purposes of examination the phrase "aligning the mask strands and the barrier ridge elements to the mask frame perpendicular to the mask strands and the barrier ridge

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elements” has been assumed to mean that the barrier ridges are aligned parallel to the mask frame members and that both of these elements are aligned perpendicular to the mask strands as is indicated by Figures 3 and 5.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,406,168 to Takagi.

Takagi discloses a tension mask assembly that includes a mask frame (Figure 1A, #111) with a pair of frame members (#'s 101 and 102) disposed at opposite ends of the mask frame. Takagi further discloses that there is a plurality of mask strands (#105) disposed between and affixed to the frame members in such a way as to produce tension in the mask strands (Column 2, Lines 34-35). Takagi finally discloses that there is a third member (Figure 1A, #109 or Figure 4, #309) disposed in a region of the strands intermediate of the two frame members.

4. Claims 2-6 and 8 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,406,168 to Takagi.

Takagi discloses the tension mask assembly of Claim 1 as described above.

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Regarding Claims 2 and 3, Takagi further discloses that the third (Figure 1A, #109) and fourth (#110) members are disposed in a direction parallel to the frame members and are offset such that the third is closer to one frame member and the fourth is closer to the other frame member (See Figure 1A).

Regarding Claim 4, etching is a method of manufacture, since this claim is directed to the tension mask assembly the method of manufacture is not germane to the issue of patentability. Takagi discloses the structure of the mask strands (Figure 1A, #105).

Regarding Claim 5, Takagi discloses that the mask strands are connected to each other with an unetched strand material on each end (see Figure 1A).

Regarding Claim 6, Takagi discloses that the third member is disposed perpendicularly to the mask strands (Figure 4, #309).

Regarding Claim 8, Takagi discloses that the third and fourth members apply a frictional force to the mask strands (See Figure 1A, #'s 109 and 110).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,406,168 to Takagi in view of U.S. Patent No. 5,613,889 to Nosker.

Takagi discloses the tension mask assembly of Claim 1 as described above.

Takagi does not exemplify that a second pair of frame members should be affixed to the first pair of frame members to form a mask frame having a rectangular shape.

Nosker, in an alternate tension mask, teaches that a second pair of frame members may be affixed to the first to form a rectangular shaped mask frame (see Figure 4). This design allows for easier handling of the frame during construction while still allowing tension to be applied to the mask.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the rectangular shape derived from the additional frame members of Nosker with the tension mask assembly of Takagi in order to facilitate the production of the tension mask assembly.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,406,168 to Takagi in view of U.S. Patent No. 5,111,106 to Kaplan.

Takagi discloses the tension mask assembly of Claim 1 as described above.

Takagi does not exemplify that the third member should be attached to the mask strands by an adhesive.

Kaplan in an alternate tension mask teaches that the third member (Figure 4b, #96) is attached to the mask strands (#89) by an adhesive (#104), in this case welding, in order to prevent unnecessary movement of the strands.

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the adhesion of the strands to the third member as taught by Kaplan with the tension mask of Takagi to prevent unnecessary movement of the mask strands.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,111,106 to Kaplan in view of U.S. Patent No. 6,111,349 to Kuwana.

Kaplan discloses a method for forming a tension mask assembly that includes providing a tension mask with a plurality of mask strands (Figure 2, #'s 64 and 66) disposed vertically between two end regions ('s 26 and 27), affixing a plurality of barrier ridge elements (Figure 4b, # 96) to the tension mask and affixing the tension mask (See Figure 2).

Kaplan does not exemplify that the plurality of mask strands should be formed by etching.

Kuwana, in an alternate tension mask, teaches that etching can be used to form a plurality of mask strands from a single thin sheet of metal (Column 2, Lines 7-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the etched mask strands of Kuwana with the method of Kaplan in order to form the mask strands from a single thin sheet of metal.

8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,111,106 to Kaplan in view of U.S. Patent No. 6,111,349 to Kuwana.

Kaplan in view of Kuwana teaches the method for forming a tension mask assembly of Claim 10 as described above.

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Regarding Claim 11 Kaplan further discloses that the barrier ridge elements should be aligned perpendicular to the mask strands (Figure 4b, #'s 96 and 89 respectively).

Regarding Claim 11 Kaplan further discloses that the barrier ridges (Figure 4b, #96) are aligned parallel to the mask frame members (Figure 2, #'s 26 and 27) and that both of these elements are aligned perpendicular to the mask strands (Figure 2, #'s 64 and 66; also Figure 4b, # 89).

As described above, Kaplan does not exemplify that the plurality of mask strands should be formed by etching.

Kuwana, in an alternate tension mask, teaches that etching can be used to form a plurality of mask strands from a single thin sheet of metal (Column 2, Lines 7-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the etched mask strands of Kuwana with the method of Kaplan in order to form the mask strands from a single thin sheet of metal.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,111,106 to Kaplan in view of U.S. Patent No. 6,111,349 to Kuwana as applied to claim 10 above, and further in view of U.S. Patent No. 4,857,027 to Makita.

Kaplan in view of Kuwana teaches the method for forming a tension mask assembly of Claim 10 as described above.

Neither Kaplan nor Kuwana exemplify that the mask strands should be trimmed flush to the outer portion of the mask frame assembly after the mask strands are affixed to the mask frame.

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Makita in an alternate tension mask teaches that the mask strands should be trimmed flush to the outer portion of the mask frame assembly after the mask strands are affixed to the mask frame in order to make it easier to handle and position the mask strands during production and remove any unnecessary material, which allows the final dimensions of the display body surrounding the screen to be smaller (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method taught by Kaplan in view of Kuwana with the in order to minimize the size of the display body needed for a given size screen.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Phinney whose telephone number is (703) 305-3999. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


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October 10, 2002



**NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800**